

REMARKS

Applicant submits that by the present Amendment and Remarks, this Application is placed in clear condition for immediate allowance. Further, the present Amendment does not raise any new matter issue or generate any new issue, but simply corrects clerical oversights and formalistic issues. That the present Amendment does not generate any new matter issue should be apparent from page 5 of the written description of the specification, lines 12 and 13, and page 6, lines 1 and 2. Applicant would note that according to page 6 of the written description of the specification, lines 1 and 2, nonlinear effect in the HNLF is as much as nearly **four times** that of Literature 1. This relation and the formula (1) show that the ratio γ / α of the HNLF is as much as nearly **two times** of that, $13 \text{ W}^{-1}\text{dB}^{-1}$, of Literature 1. Therefore, the rate ratio γ / α of the HNLF should be $25 \text{ W}^{-1}\text{dB}^{-1}$ rather than $251 \text{ W}^{-1}\text{dB}^{-1}$.

Applicant respectfully submits, for the Examiner's convenience, an origin of the clerical error and details for the calculation procedure. Specifically, the value of γ / α of NZ-DSF on page 5 of the written description of the specification, line 15, can be calculated with the value γ ($=4 \text{ W}^{-1}\text{k}^{-1}$) and α ($=0.3 \text{ dB/km}$) on page 5, lines 12 and 13. The value of γ / α of HNLF on page 5, line 21, can be calculated with the value γ / α ($=13 \text{ W}^{-1}\text{dB}^{-1}$) of NZ-DSF on page 5, lines 15, formula (1) representing nonlinear effect, and the description on page 6, lines 1 and 2.

$$\left(\frac{\gamma_{\text{HNLF}}}{\alpha_{\text{HNLF}}} \right)^2 = 4 \times \left(\frac{\gamma_{\text{NZ-DSF}}}{\alpha_{\text{NZ-DSF}}} \right)^2$$

The value γ of HNLF on page 5, line 20, can be calculated with the value γ / α ($=25 \text{ W}^{-1}\text{dB}^{-1}$) of HNLF on page 5, line 21, and the value α ($=0.8 \text{ dB/km}$) on page 5, line 20.

The clerical errors were caused in the translation process. For example, the phrase “13[1/W/dB]” in the Japanese specification, paragraph [0018] was erroneously translated into “131 W⁻¹dB⁻¹” in the English specification.

Applicant, therefore, submits that the present Amendment does not generate any new matter issue or raise any new issue impacting the Examiner’s rejections of record. Further, based upon the arguments submitted *infra*, it should be apparent that the imposed rejections have been overcome and that all pending claims are in condition for immediate allowance. Accordingly, entry of the present Amendment and Remarks, and favorable consideration, are solicited pursuant to the provisions of 37 C.F.R. § 1.116.

Claims 1 through 4, 6 through 8, 10 and 11 were rejected under 35 U.S.C. § 102 for lack of novelty as evidenced by Bolshtyansky et al.

In the statement of the rejection the Examiner adhered to the position that Bolshtyansky et al. disclose a module, broadband light source, and amplifier corresponding to those claimed. In response to the arguments advanced in the Amendment submitted January 17, 2006, the Examiner asserted, *inter alia*, that Bolshtyansky et al. **inherently** discloses nonlinear mediums. This rejection is traversed as factually erroneous.

As Applicants previously pointed out, the factual determination of lack of novelty requires the **identical** disclosure in a single reference of **each** element of a claimed invention such that the identically claimed invention is placed into the recognized possession of one having ordinary skill in the art. *Dayco Prods., Inc. v. Total Containment, Inc.*, 329 F.3d 1358, 66 USPQ2d 1801 (Fed. Cir. 2003); *Crown Operations International Ltd. v. Solutia Inc.*, 289 F.3d 1367, 62 USPQ2d 1917 (Fed. Cir. 2002). When imposing the rejection of U.S.C. § 102 for lack

of novelty the Examiner is required to specifically identify where an applied reference is asserted to identically disclose each and every feature of a claimed invention, particularly when such is not apparent as in the present case. *In re Rijckaert*, 9 F.3d 1531, 28 USPQ2d 1955 (Fed. Cir. 1993); *Lindermann Maschinenfabrik GMBH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481 (Fed. Cir. 1984). That burden has not been discharged. Rather, the Examiner rewired the previous rejection and asserted that Applicant acknowledges the existence of nonlinear mediums and that such nonlinear mediums are inherently disclosed by Bolshtyansky et al. Applicant disagrees.

Specifically, inherency requires absolute **certainty**, not mere probabilities or possibilities, and certainly **not speculation**. The mere fact that a certain thing may result from a given set of circumstances is **not** sufficient to establish inherency. *In re Rijckaert*, *supra*; *Oelrich*, 666 F.2d 578, 212 USPQ 323 (CCPA 1081); *Continental Can Co. USA, Inc. v. Monsanto Co.*, 948 F.2d 1264, 20 USPQ2d 1746 (Fed. Cir. 1991). Furthermore, as articulated by the Honorable Board of Patent Appeals and Interference in *ex parte Schricker*, 56 USPQ2d 1723, 1725 (BPAI 200):

However, when an Examiner relies on inherency, it is incumbent on the Examiner to point to the “page and line” of the prior art which justifies an inherency theory. Compare, *In re Rijckaert*, 9 F.3d 1531, 1533, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993) (when the PTO asserts that there is an explicit or implicit teaching or suggestion in the prior art, it must indicate where such a teaching or suggestion appears in the prior art); *In re Yates*, 663 F.2d 1054, 107, 211 USPQ 1149, 1151 (CCPA 1981).

In the present case the Examiner did not identify any basis in Bolshtyansky et al. to support the determination that nonlinear mediums are inherently i.e., **necessarily** disclosed.

As to the asserted admission, the mere existence of nonlinear mediums does not mean that they are disclosed by Bolshtyansky et al. The Examiner also points to Agrawal. However, whatever may be disclosed by Agrawal does not automatically mean that such is inherently disclosed by Bolshtyansky et al. Rather, it should be apparent that Bolshtyansky et al. disclose a

single fiber 52 in Fig. 3, and that the output light may be combined into a single fiber 52 using one or more wavelength division multiplexing couplers 50 or other suitable optical multiplexer arrangements, noting column 5 of Bolshtyansky et al., lines 64 through 67. The single fiber 52 constitutes a part of a light source system according to claim 1, the light source system which emits light having two or more different output peak wavelengths. Clearly, Bolshtyansky et al. neither disclose nor suggest a nonlinear medium, as defined in claim 1, having an input and an output port, wherein the nonlinear medium affords nonlinear effect on light emitted from the light source stream and input from the input port, and outputting the resulting light as pump light from the output port. Again, silence in a reference is no substitute for the requisite facts. *In re Burt*, 356 F.2d 115, 148 USPQ 548 (CCPA 1966). Further, the optical fiber 2052 of Bolshtyansky et al. corresponds to a fiber which is disposed between a light source system 24 and an output 34 in the embodiment illustrated in Fig. 3.

Applicant stresses that the Examiner's reliance upon the doctrine of inherency to establish that Bolshtyansky et al. necessarily disclose a nonlinear medium is misplaced and not predicated upon an accurate technological understanding. As one having ordinary skill in the art, in a communication system, an optical fiber is typically employed in a condition where it does **not show an nonlinear effect**. An application of an optical fiber as a nonlinear medium is restricted to special case situations, such as a Raman amplification or a wavelength conversion. An optical fiber becomes a "nonlinear medium," as recited in claim 1, only when it is used as a nonlinear medium. It cannot be regarded as the "nonlinear medium" while there is **no** information about how to use it. The Examiner's determination that an optical fiber is inherently, i.e., necessarily, a nonlinear medium is without factual basis and amounts to speculation, particularly in the absence of any information on how it is used.

Based upon the foregoing it should be apparent that the claimed inventions clearly **distinguishes over Bolshtyansky et al.** because a nonlinear medium in the present invention is not used as a Raman amplification fiber but employed as a fiber disposed at a front stage of the Raman amplification fiber. This **fundamental difference** between the claimed inventions and Bolshtyansky et al. undermine the factual determination that Bolshtyansky et al. disclose a module, broadband light source, and amplifier corresponding to those claimed. *Minnesota Mining & Manufacturing Co. v. Johnson & Johnson Orthopaedics Inc.*, 976 F.2d 1559, 24 USPQ2d 1321 (Fed. Cir. 1992); *Kloster Speedsteel AB v. Crucible Inc.*, 793 F.2d 1565, 230 USPQ 81 (Fed. Cir. 1986). Applicant, therefore, submits that the imposed rejection of claims 1 through 4, 6 through 8, 10 and 11 under 35 U.S.C. § 102 for lack of novelty as evidenced by Bolshtyansky et al. is not factually viable and, hence, solicits withdrawal thereof.

Claims 5 and 9 were rejected under 35 U.S.C. § 103 for obviousness predicated upon Bolshtyansky et al. in view of Agrawal.

This rejection is traversed. Initially, claims 5 and 9 depend from independent claim 1. Applicant incorporates herein the arguments previously advanced in traversing the imposed rejection of claim 1 under 35 U.S.C. § 102 for lack of novelty as evidenced by Bolshtyansky et al. The secondary reference to Agrawal does not cure the previously argued deficiency of Bolshtyansky et al.

The Separate Patentability of Claims 5 and 9 Is Advocated.

Applicant again submits that the Examiner did **not** establish the requisite fact-based motivation to arrive at the claimed invention absent improper reliance upon Applicant's

disclosure. *Panduit Corp. v. Dennison Mfg. Co.*, 774 F.2d 1082, 227 USPQ 337 (Fed. Cir. 1985). In the Office Action of October 20, 2005, the Examiner relied upon “routine mathematical calculations”. The Examiner now retreats from that position, as the Examiner should. Instead, the Examiner now relies upon some aura emanating from the references to support the motivational element. This approach is legally erroneous.

In order to establish the requisite fact-based motivation, the Examiner must make **clear and particular factual** findings as to a **specific** understanding or **specific** technological principle and, based upon such facts, explain **why** one having ordinary skill in the art would have been realistically motivated to modify **particular** prior art, in this case Bolshtyansky et al., to arrive at the claimed invention. *In re Lee*, 237 F.3d 1338, 61 USPQ2d 1430 (Fed. Cir. 2002); *Ecolochem Inc. v. Southern California Edison, Co.*, 227 F.3d 1361, 56 USPQ2d 1065 (Fed. Cir. 2000); *In re Kotzab*, 217 F.3d 1365, 55 USPQ 1313 (Fed. Cir. 2000); *In re Dembiczak*, 175 F.3d 994, 50 USPQ2d 1614 (Fed. Cir. 1999). That burden has **not** been discharged.

Instead, the Examiner initially refers to “knowledge generally available to one having ordinary skill in the art” (8th enumerated paragraph on page 3 of the March 29, 2006 Office Action). Whatever may or may not be known in **general** does not provide the requisite motivation to modify a **specific** reference in a **specific** manner to arrive at a **specifically** claimed invention. *In re Lee*, *supra*; *Ecolochem Inc. v. Southern California Edison, Co.*, *supra*; *In re Kotzab*, *supra*; *In re Dembiczak*, *supra*. See, also, *In re Rouffet*, 149 F.3d 1350, 47 USPQ2d 1453 (Fed. Cir. 1998).

The Examiner then cites prior decisions of the Court of Appeals of the Federal Circuit for generalities. The Examiner, however, conspicuously ignores the decisions cited by Applicant of

a more recent vintage requiring **facts** to support a **specific** motivation to modify a **specific** reference in a **specific** matter to arrive at a **specifically** claimed invention.

The Examiner says that Agrawal discloses a textbook on general knowledge. What that has to do with the **specific** motivation to modify a **specific** reference in the present case is **not** apparent. This overgeneralization is clearly legally erroneous. *In re Rouffert, supra*.

Applicant, therefore, submits that the imposed rejection of claims 5 and 9 under 35 U.S.C. § 103 for obviousness predicated upon Bolshtyansky et al. in view of Agrawal is not factually or legally viable and, hence, solicits withdrawal thereof.


Based upon the foregoing it should be apparent that the imposed rejections have been overcome and that all pending claims are in condition for immediate allowance. Favorable consideration is, therefore, solicited.

Application No.: 10/699,846

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

McDERMOTT WILL & EMERY LLP



Arthur J. Steiner
Registration No. 26,106

600 13th Street, N.W.
Washington, DC 20005-3096
Phone: 202.756.8000 AJS:bjs/lrd
Facsimile: 202.756.8087
Date: June 26, 2006

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